MODULE 5

GOTHIC ARCHITECTURE

HISTORICAL BACKGROUND

LOCATION

HISTORY

Gothic architecture is a style of architecture that flourished during the high and late medieval period. It evolved from Romanesque architecture and was succeeded by Renaissance architecture. Originating in 12th-century France and lasting into the 16th century.

Gothic architecture was known during the period as *Opus Francigenum* ("French work"). Gothic architecture is most familiar as the architecture of many of the great cathedrals, abbeys and churches of Europe.

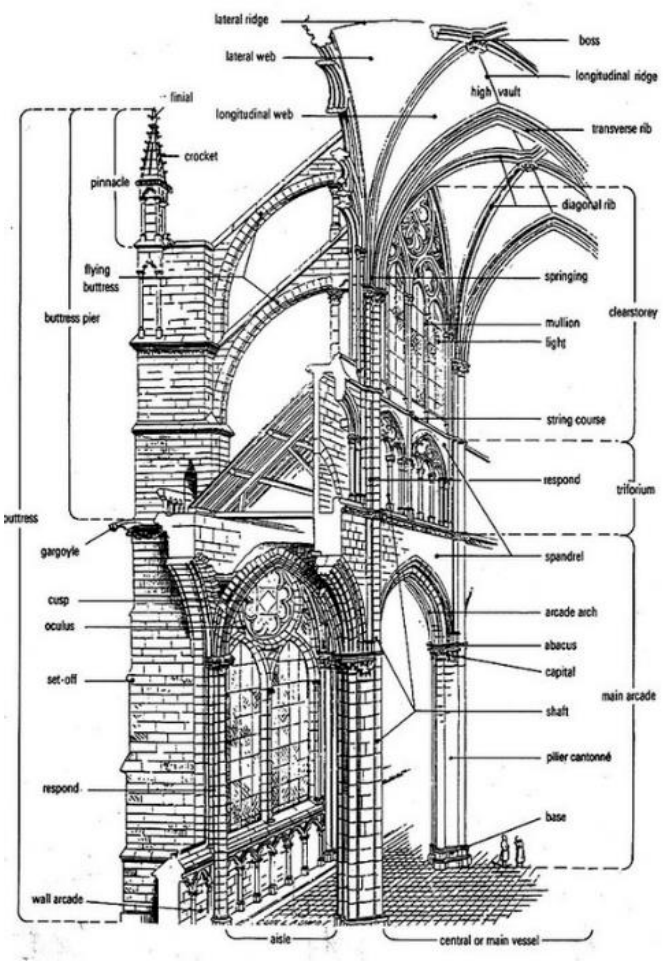
It is also the architecture of many castles, palaces, town halls, guild halls, universities and to a less prominent extent, private dwellings, such as dorms and rooms.

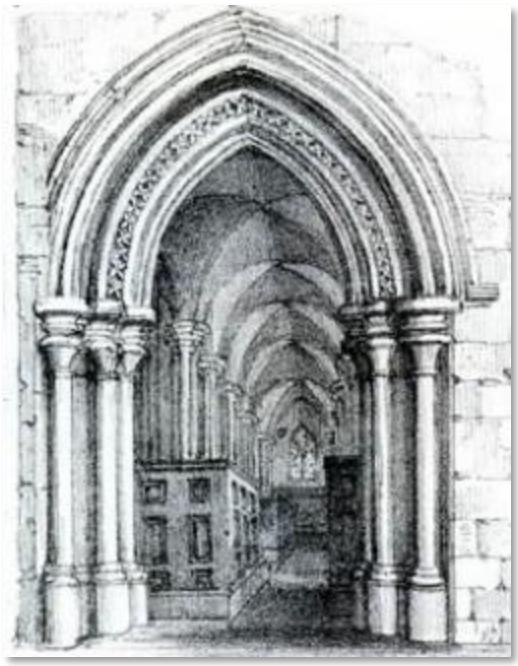
A series of Gothic revivals began in mid-18th-century England, spread through 19th-century Europe and continued, largely for **ecclesiastical and university structures, into the 20th century**.

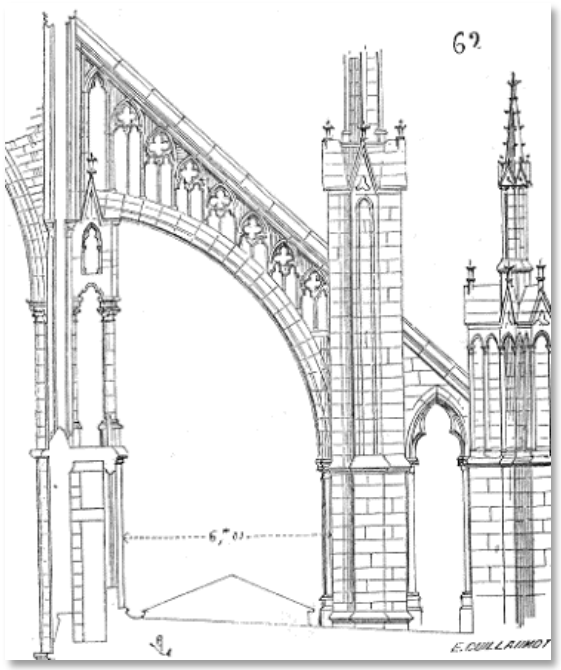
STYLE

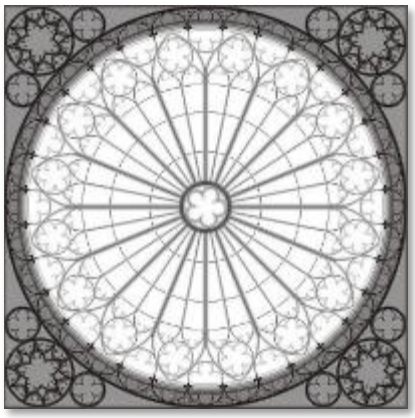
Gothic architecture is the architecture of the **late medieval period**, characterised by use of the **pointed arch**, **rib vault**, **buttresses**, including **flying buttresses**; **large windows** which are often grouped, or have **tracery**; **rose windows**, **towers**, **spires** and **pinnacles**; and **ornate façades**.

As an architectural style, Gothic developed primarily in **ecclesiastical architecture**, and its principles and characteristic forms were applied to other types of buildings. Buildings of every type were constructed in the Gothic style, with evidence remaining of simple **domestic buildings**, elegant **town houses**, **grand palaces**, **commercial premises**, **civic buildings**, **castles**, **city walls**, **bridges**, **village churches**, **abbey churches**, **abbey complexes** and **large cathedrals**.

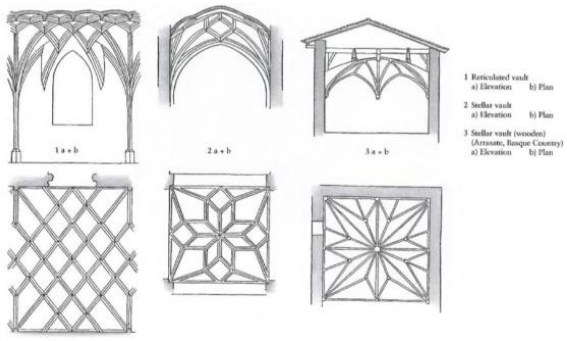


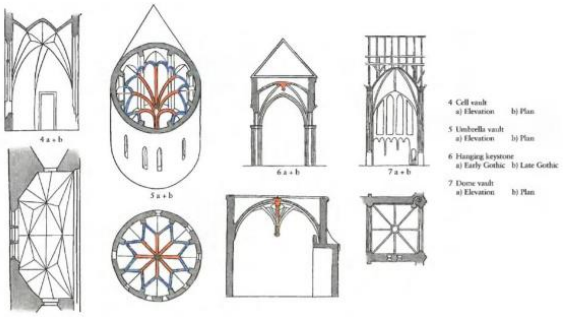




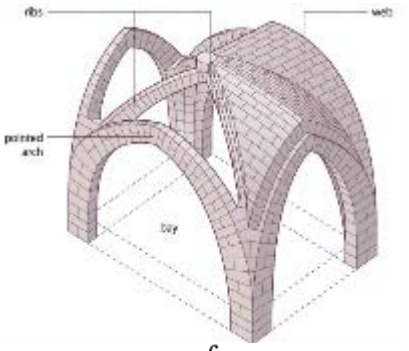


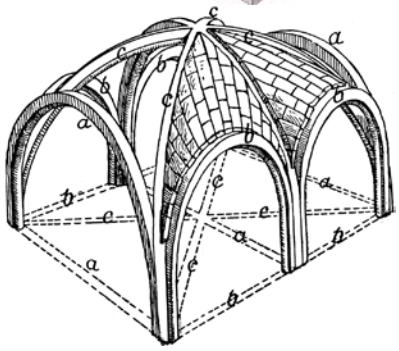
POINTED ARCHES



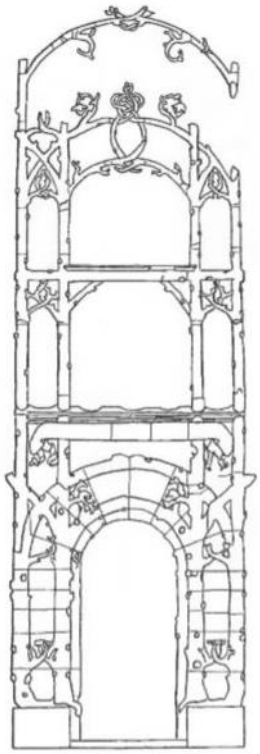


RIBBED VAULTS

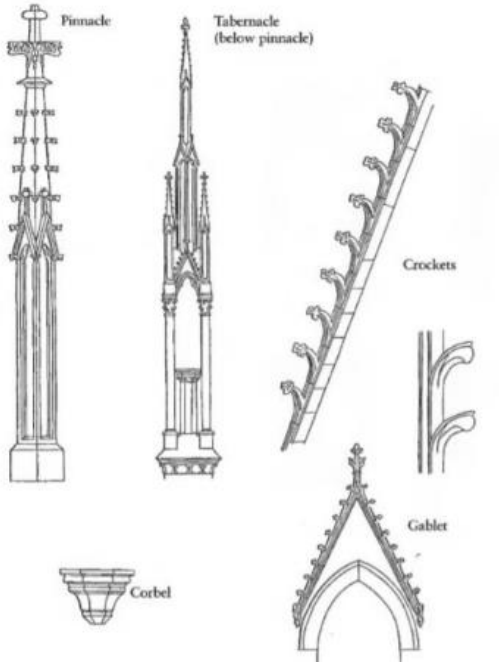


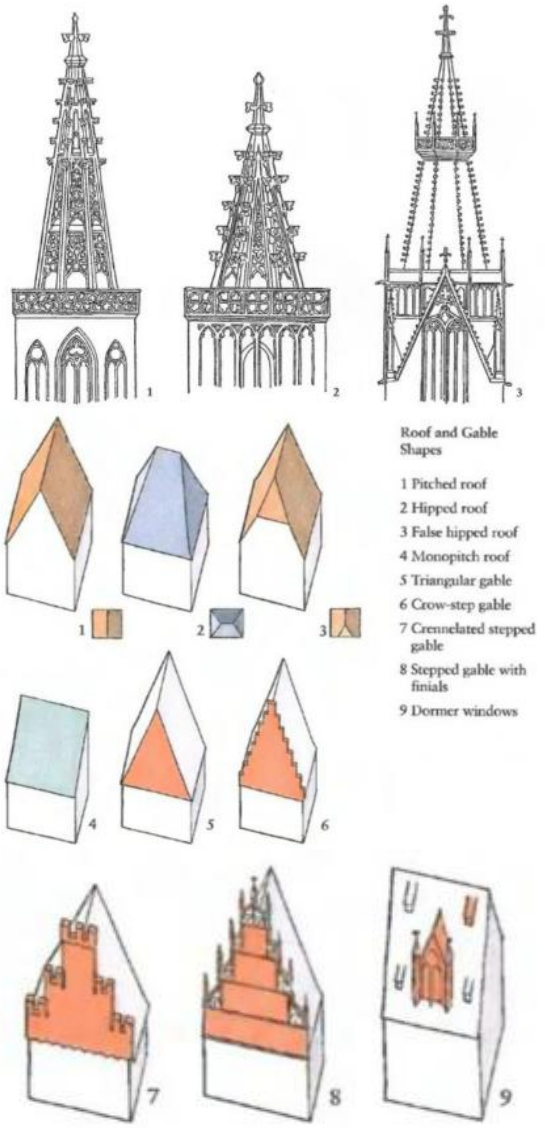


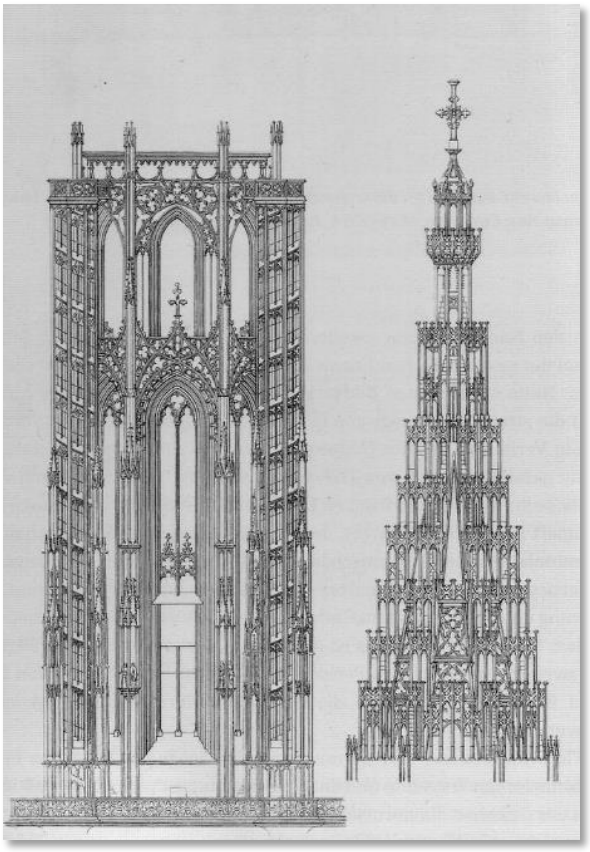
DECORATIVE ELEMENTS

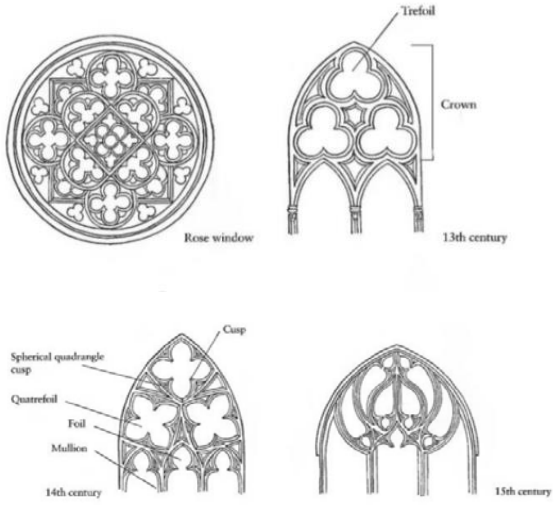


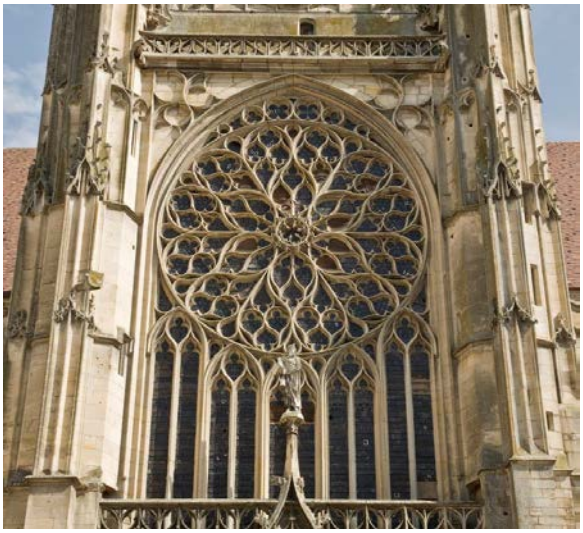
Branch tracery









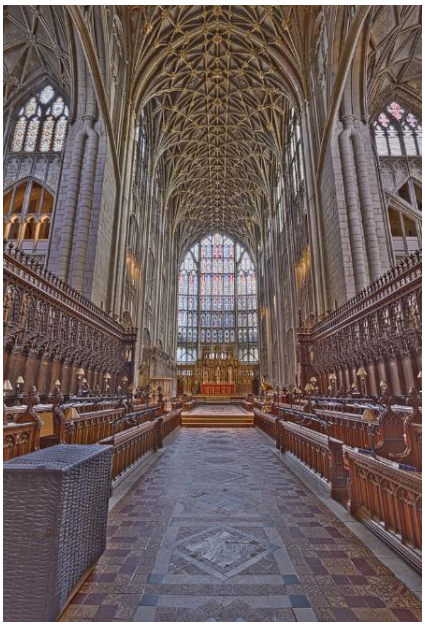


ROSE WINDOWS AND TRACERY

TRACERY

ornamental stone openwork, typically in the upper part of a Gothic window.

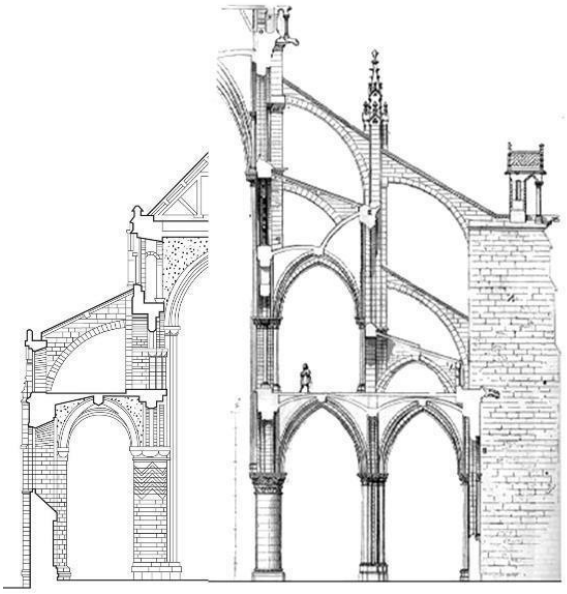
The greatest number of surviving Gothic buildings are churches. The Gothic style is most particularly associated with the great cathedrals of Northern France, England and Germany, with other fine examples occurring across Europe.



Choir of Gloucester Cathedral, Gloucester, England

York Minster, England

DIFFERENCE FROM THE ROMANESQUE STYLE



By the 12th century, **Romanesque architecture**, was established throughout Europe and provided the basic architectural forms and units that were to remain in evolution throughout the **Medieval period**.

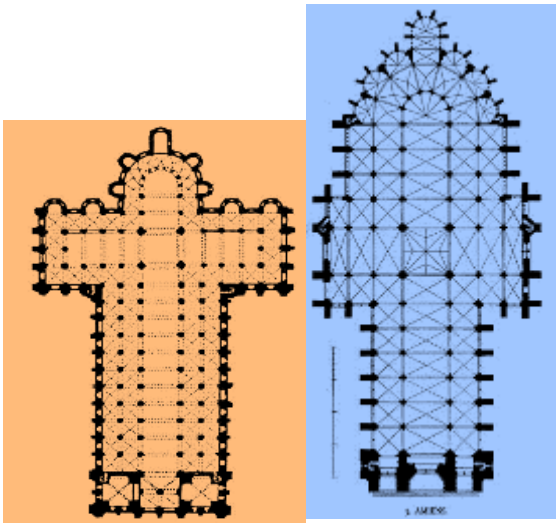
The important categories of building: the cathedral church, the parish church, the monastery, the castle, the palace, the great hall, the gatehouse, the civic building, had been established in the Romanesque period.

Many architectural features that are associated with **Gothic architecture had been developed and used by the architects of Romanesque buildings**. These include ribbed vaults, buttresses, clustered columns, ambulatories, wheel windows, spires and richly carved door tympana.

These were already features of ecclesiastical architecture before the development of the **Gothic style, and all were to develop in increasingly elaborate ways**.

It was principally the widespread introduction of a single feature, **the pointed arch**, which was to bring about the change that separates Gothic from Romanesque. The technological change permitted a **stylistic change** which broke the tradition of massive masonry and solid walls penetrated by small openings, replacing it with a **style where light appears to triumph over substance**.

With its use came the development of many other architectural devices, previously put to the test in scattered buildings and then called into service to meet the structural, aesthetic and ideological needs of the new style. These include the **flying buttresses**, **pinnacles** and **traceried windows** which typify Gothic ecclesiastical architecture



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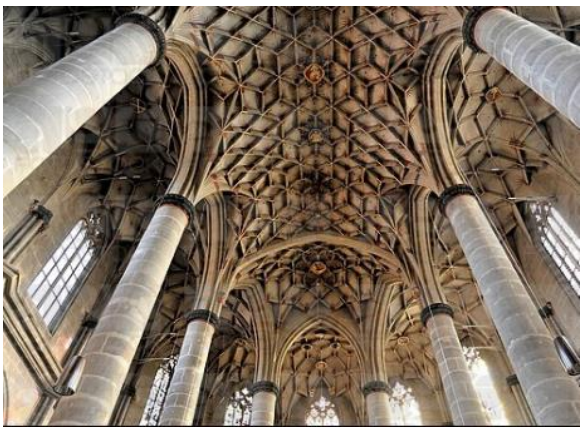


Romanesque vs. Gothic Architecture		
	Romanesque	Gothic
Chapels and apse:	Separate compartments.	Unified, unbroken space.
Vault	Mostly barrel-vaults, some groin-vaults.	Groin-vaulted cathedrals.
Arch type	Rounded arches.	Pointed arches.
Main vault support	Thick walls, buttresses.	Exterior flying buttresses.
Clerestory	Small windows.	Large stained-glass windows.
Elevation	Horizontal, modest height.	Vertical, soaring.
Exterior	Plain, little decoration, solid.	Ornate, delicate, lots of sculpture.
Sculptural decoration	Thin, elongated, abstract figures.	More realistic proportions and individualized features.
Mood	Dark, gloomy.	Tall, light-filled.
Example	St. Sernin, Toulouse, France.	Chartres Cathedral, France.

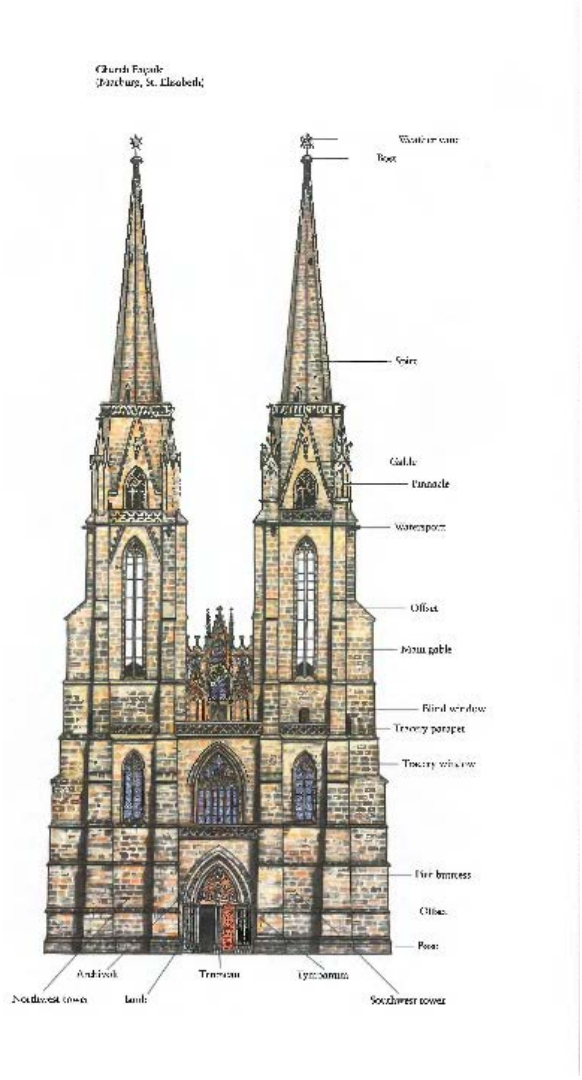
Characteristics of Gothic cathedrals

A Gothic cathedral or abbey was, prior to the 20th century, generally the landmark building in its town, rising high above all the domestic structures and often surmounted by one or more towers and pinnacles and perhaps tall spires.

These cathedrals were the skyscrapers of that day and would have been the largest buildings by far that Europeans would ever have seen. It is in the architecture of these Gothic churches that a unique combination of existing technologies established the emergence of a new building style. Those technologies were the pointed arch, the ribbed vault, and the buttress.

The Gothic style, when applied to a religious building, emphasizes verticality and light. This appearance was achieved by the development of certain architectural features, which together provided an engineering solution. The structural parts of the building ceased to be its solid walls, and became a stone skeleton comprising clustered columns, pointed ribbed vaults and flying buttresses.

FAÇADE



HEIGHT

A characteristic of Gothic church architecture is its height, both absolute and in proportion to its width, the verticality suggesting an aspiration to Heaven. A section of the main body of a Gothic church usually shows the nave as considerably taller than it is wide. In England the proportion is sometimes greater than 2:1, while the greatest proportional difference achieved is at Cologne Cathedral with a ratio of 3.6:1.

Externally, towers and spires are characteristic of Gothic churches, the number and positioning being one of the greatest variables in Gothic architecture.

In Italy, the tower, if present, is almost always detached from the building, as at Florence Cathedral, and is often from an earlier structure. In France and Spain, two towers on the front is the norm. In England, Germany and Scandinavia this is often the arrangement.

VERTICALITY

The **pointed arch** lends itself to a suggestion of height. This appearance is characteristically further enhanced by both the architectural features and the decoration of the building.

On the exterior, the **verticality is emphasised** in a major way by the **towers and spires** and in a lesser way by strongly projecting vertical buttresses, by narrow half-columns called attached shafts which often pass through several storeys of the building, by long narrow windows, vertical mouldings around doors and figurative sculpture which emphasises the vertical and is often attenuated. The roofline, gable ends, buttresses and other parts of the building are often **terminated by small pinnacles.**

On the interior of the building attached shafts often sweep unbroken from floor to ceiling and meet the ribs of the vault, like a tall tree spreading into branches. In many Gothic churches, the treatment of vertical elements in gallery and window tracery creates a strongly unifying feature that counteracts the horizontal divisions of the interior structure.

Light

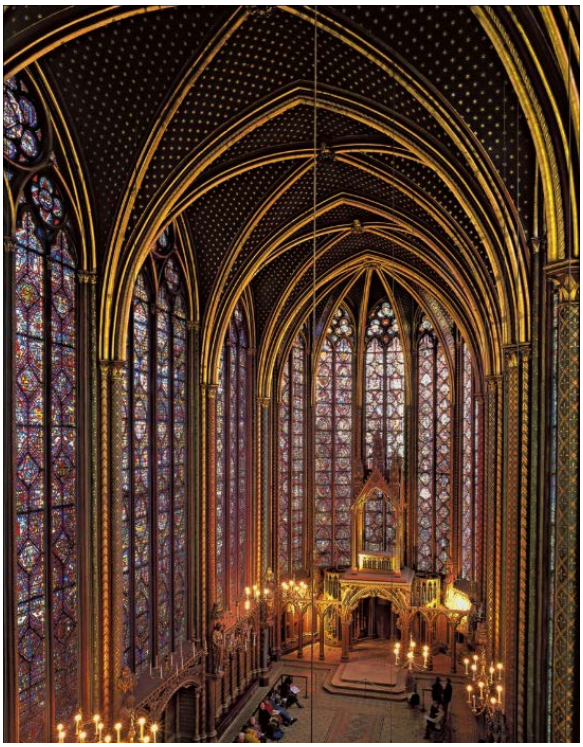
Expansive interior light has been a feature of Gothic cathedrals. The metaphysics of light in the Middle Ages led to clerical belief in its divinity and the importance of its display in holy settings. The **Celestial Hierarchy**, was popular among monks in France. **Pseudo-Dionysius**

held that all light, even light reflected from metals or streamed through windows, was divine.

Gothic architecture has featured expansive windows. The increase in size between windows of the Romanesque and Gothic periods is related to the use of the ribbed vault, and in particular, the pointed ribbed vault which channelled the weight to a supporting shaft with less outward thrust than a semi-circular vault. Walls did not need to be so weighty.

A further development was the flying buttress which arched externally from the springing of the vault across the roof of the aisle to a large buttress pier projecting well beyond the line of the external wall.

The internal columns of the arcade with their attached shafts, the ribs of the vault and the flying buttresses, with their associated vertical buttresses jutting at right-angles to the building, created a stone skeleton. Between these parts, the walls and the infill of the vaults could be of lighter construction. Between the narrow buttresses, the walls could be opened up into large windows.



Lancet arch

Equilateral arch

Flamboyant arch

Depressed arch

Fan Vault

A fan vault is a form of vault used in the Gothic style, in which the ribs are all of the same curve and spaced equidistantly, in a manner resembling a fan.

The earliest example, dating from about the year 1351, may be seen in the cloisters of Gloucester Cathedral. The largest fan vault in the world can be found in the chapel of King's College, Cambridge.

The fan vault is peculiar to England.

Notre Dame Cathedral

Cathédrale Notre-Dame de Paris (Cathedral of Our Lady of Paris)

Location: Paris, Ile-de- France, France• Date: 1163-1345

Features: Medieval Stained Glass; Romanesque Sculpture

History of the cathedral

The Notre Dame de Paris stands on the site of Paris first Christian church, Saint Etienne basilica, which was itself built on the site of a Roman temple to Jupiter.

• Construction on the current cathedral began in 1163

• Construction of the west front, with its distinctive two towers, began in around 1200 before the nave had been completed.

• Over the construction period, numerous architects worked on the site, as is evidenced by the differing styles at different heights of the west front and towers.

• Between 1210 and 1220, the fourth architect oversaw the construction of the level with the rose window and the great halls

The towers were finished around 1245 and the cathedral was finally completed around 1345.

• During the reigns of Louis XIV and Louis XV at the end of the 17th century the cathedral underwent major alterations, during which many tombs and stained glass windows were destroyed.

• In 1793, the cathedral fell victim to the French Revolution.

• Many sculptures and treasures were destroyed or plundered

• The cathedral also came to be used as a warehouse for the storage of food.

- The plan is demarcated by the Roman cross training oriented to the West, increased longitudinal axis, and is not noticeable from the outside. The cross is “embedded” in the building, surrounded by a double ambulatory, which circulates in the choir at the top (east) and runs parallel to the ship.
- Besides the plan in the form of a cross, the cathedral has a facade of 40 meters wide, a length of 130 meters and a maximum height of 69 meters. Contains 5 ships, 37 chapels, rose 3 to 13.5 meters in diameter each and a total of 113 windows.

Gothic Features

- Double aisles
- ambulatories on a bent axial line
- Transepts not projected beyond the aisle wall
- High vault -Sexpartite vaulting covering double aisles (a ribbed vault whose lateral triangles are bisected by an intermediate transverse rib, producing six triangles within a bay)Vault is 100ft (30m) high
- Double span flying buttresses (earliest form)

The west front of the cathedral is one of its most notable features, with its two 69-meter (228-feet) tall towers.

The Galerie des Chimères or Grand Gallery connects the two west towers, and is where the cathedrals legendary gargoyles (chimères-water spouts) can be found.

The gargoyles are full of Gothic character but are not medieval - they were added during the 19th-centuryrestoration.

The Kings Gallery is a line of statues of the 28 Kings of Judah and Israel, which was redesigned by Viollet-le-Duc to replace the statues destroyed during theFrench Revolution.

The beautiful West Rose Window dates from about 1220.

The west rose window at Notre Dame is 10 meters in diameter and exceptionally beautiful.

Dating from about 1220, it retains most of its original glass and tracery.

The main theme of the west rose is human life, featuring symbolic scenes such as the Zodiacs and Labors of the Months.

On the exterior, it is fronted by a statue of the Virgin and Child accompanied by angels.

The south rose window installed around 1260

its general themes are the New Testament, the Triumph of Christ

The south rose is 12.9 meters in diameter and contains 84 panes of glass.

Radiating out from a central medallion of Christ, it consists of four concentric circles of 12 medallions, 24 medallions, quadrilob SOUTH ROSE es, and 24 trilobes

West front has a solid quality,Triple portals & Gallery of Kings - Represents twenty-eight kings of the Old Testament

The three west portals of Notre Dame Cathedral are magnificent examples of early Gothic art.

Sculpted between 1200 and 1240, they depict scenes from the life of the Virgin Mary, the Last Judgment, and scenes from the life of St. Anne (the Virgin Marys mother).

French Gothic architecture is a style of architecture prevalent in France from 1140 until about 1500

The designations of styles in French Gothic architecture are as follows:

- Early Gothic
- High Gothic
- Rayonnant
- Late Gothic or Flamboyant style

These divisions are effective, but still set grounds for debate. Because the lengthy construction of Gothic cathedrals could span multiple architectural periods, and builders in each period did not always follow wishes of previous periods, dominant architectural style often changes throughout a particular building. Consequently, it is often difficult to declare one building as a member of a certain era of Gothic architecture. It is more useful to use the terms to describe specific elements within a structure, rather than applying them to the building as a whole.

Early Gothic

This style began in 1140 and was characterized by the adoption of the pointed arch and transition from late Romanesque architecture. To heighten the wall, builders divided it into four tiers: arcade (arches and piers), gallery, triforium , and clerestorey . To support the higher wall builders invented the flying buttresses, which reached maturity only at High Gothic during the 13th century. The vaults were six ribbed sexpartite vaults.

High Gothic

This 13th-century style canonized proportions and shapes from early Gothic and developed them further to achieve light, yet tall and majestic structures. The wall elevation was modified from four to only three tiers: arcade, triforium, and clerestorey. Piers coronations were smaller to avoid stopping the visual upward thrust. The clerestorey windows changed from one window in each segment, holed in the wall, to two windows united by a small rose window. The rib vault changed from six to four ribs. The flying buttresses matured, and after they were embraced at Notre-Dame de Paris and Notre-Dame de Chartres, they became the canonical way to support high walls, as they served both structural and ornamental purposes

Chartres Cathedral, also known as the Cathedral of Our Lady of Chartres is a cathedral of the Latin Church located in Chartres

he building's exterior is dominated by heavy flying buttresses which allowed the architects to increase the window size significantly, while the west end is dominated by two contrasting spires – a 105-metre (349 ft) plain pyramid completed around 1160 and a 113-metre (377 ft) early 16th-century Flamboyant spire on top of an older tower. Equally notable are the three great façades, each adorned with hundreds of sculpted figures illustrating key theological themes and narratives

The plan is cruciform. A two bay narthex at the western end opens into a seven bay nave leading to the crossing, from which wide transepts extend three bays each to north and south. East of the crossing are four rectangular bays terminating in a semicircular apse. The nave and transepts are flanked by single aisles, broadening to a double-aisled ambulatory around the choir and apse. From the ambulatory radiate three deep semi-circular chapels and three much shallower ones.

The elevation of the nave is three-storied, with arcade, triforium and clerestory levels. By eschewing the gallery level that featured in many early Gothic cathedrals (normally between arcade and triforium), the designers were able to make the richly glazed arcade and clerestory levels larger and almost equal in height, with just a narrow dark triforium in between.

Increasing the size of the windows meant reducing the wall area considerably, something which was made possible only by the extensive use of flying buttresses on the outside. These buttresses supported the considerable lateral thrusts resulting from the 34m high stone vaults, higher and wider than any attempted before in France. These vaults were quadripartite, each bay split into four webs by two diagonally crossing ribs, unlike the sexpartite vaults adopted in many earlier Gothic cathedrals such as at Laon.

The cathedral has three great façades, each equipped with three portals, opening into the nave from the west

and into the transepts from north and south. In each façade the central portal is particularly large and was only used for special ceremonies, while the smaller side portals allowed everyday access for the different communities that used the cathedral